

Is the Entrepreneurial Intention (EI) of University Students Dependant on Gender?

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Abstract

Purpose: The purpose of the study was to find out if the entrepreneurial intention (EI) of university students was based on gender. A number of previous studies have presented conflicting results on the relationship.

Methodology: A questionnaire was used to collect data from 314 students at a South African university. The sample was purposively selected for convenience and it comprised of second year under graduate students studying an entrepreneurship module. Entrepreneurial intention (EI) was measured using a 14 item scale designed from literature. Participants were asked to rank on a 5 point Lickert scale how they related to the stated elements, covering the different dimensions.

Findings: The study confirmed that EI was not dependent on gender. It shows that if a group of people underwent the same academic induction and experiences, gender would not determine their EI.

Research limitations: One weakness of this study is that the intentions expressed were cross sectional outcomes. A longitudinal study to trace these individuals over time is therefore recommended.

Social implications: Literature shows that women tend to lag behind in entrepreneurial activities. Appropriate interventions should therefore be designed to afford equal opportunities for women to operate successful ventures as their male counterparts.

Originality: A number of previous studies have presented conflicting results on the relationship between Entrepreneurial Intention (EI) and gender. Results seem to be based on

the sample studied. The localisation of the study was therefore considered important to help contextualise interventions.

Key words: gender, entrepreneurial intention, performance, discrimination, university students, innovation, risk taking, pro-activeness

Research Paper

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Introduction

The phenomenon of intention is grounded in the theory of planned behaviour as espoused by Ajzen (1991). Entrepreneurial Intention (EI) is the thinking and behaviour of risk taking, proactiveness and innovativeness which is widely believed to impact positively and significantly to venture creation in general and to organizational performance in particular (Sciascia, Mazzola and Kellermanns 2014, Fais 2015, Dada and Watson 2013). The higher prevalence of EI among a population is therefore desirable as it will likely enhance the creation of new ventures or the promotion of entrepreneurship. EI can be assumed to be a latent orientation for business start-up or self-employment (Engle, Dimitriadi, Gavidia, Schlaegel, Delanoe, Alvarado, He, Buame and Wolff 2010). As pointed out by Shane, Locke, and Collins (2003) the entrepreneurial process would not take place without intentions and the resultant opportunity seeking behaviours. In psychology literature, intention proved to be the best predictor of planned behaviour, particularly when that behaviour is rare, hard to observe, or involves unpredictable time lags, such as entrepreneurship (Souitaris, Zerbinati, and Al-Laham 2007, Krueger, Reilly and Carsrud 2000). Intentions are determined by attitudes and attitudes are affected by, "exogenous influences" such as situational variables (Krueger, et. al 2000). It is therefore important to know the entrepreneurial intentions of a given population.

Gender is a factor that has been considered in many studies that have analysed behaviour

(Kirkwood 2009, Envick and Langford 1989). The underlying enquiry was to find out if behaviour such as EI is dependent on gender. This was driven by the apparent differences in the number of businesses started by women as well as the differences in performance of these businesses compared to those of their male counterparts. The studies on whether gender is a determinant have been inconclusive, though more studies tend to point towards females having less EI, than men. For example, Garcia and Mareno (2010), Fatoki (2014) and Zeffani (2013) found no statistically significant differences, while Langowitz and Minitti (2007), Minitti and Nardone, (2007), and Veciana, Aponte, and Urbano (2005), among many others did find a significant difference. EI has become a new research focus area in contemporary research especially in vocational development (Hakkarainen, LOnka and Salmela-Aro 2017, Hirshi and Fischer 2013). Unfortunately, as stated by Fayolle and Linan (2014), not enough research on EI has been done on the adolescence to young adulthood population with regards to their preparation for future career options. The university student population is a special group with regards to any nation's future managerial and entrepreneurial capacitation. It is for this reason that Bergmann et al., (2016) and Houser (2014) argue that the university is an ideal context for testing ones entrepreneurial capabilities. The study therefore sets to establish if there is a difference in EI between young university students. This will assist in predicting the future of entrepreneurial activity within the given community and enable appropriate interventions.

The next section reviews the literature on gender, followed by the research methodology, findings and the conclusion. The study's policy implications and recommendations are provided last.

Literature Review

The evidence on the differences in EI between the genders has been contradictory (Quaye,

Acheampong and Asiedu 2015). A number of studies (Goktan and Gupta 2015, Dabic, Daim, Bayraktoroglu, Novak, and Basic 2012, Dawson and Henley 2012) have noted gender differences in the perceptions and attitudes towards entrepreneurship. The ambiguous findings of such studies remain a major source of contention. For example, Brush and Hisrich (2000) note that studies about the factors influencing the performance of female run businesses remain inconclusive and scarce.

Adachi and Hisada (2017) found that gender could not determine one's likelihood of entrepreneurship. This is in line with a finding by Kankisingi and Dhliwayo (2014) which established that there were no differences between men and women on how knowledge was acquired and transferred to support different activities such as innovations in small and medium enterprises (SMEs). A number of studies have cited strong similarities between men and women in elements that drive entrepreneurial behaviour, such as desire for control, autonomy and achievement. According to Mueller and Dato On (2008) one would expect that within modern egalitarian societies differences in entrepreneurial intentions between the genders will be minimal or non-existent. This is the same stance taken by Knotts, Jones and Brown (2008) who note that, for quite some time now, researchers have been trying to find out if gender was a critical differentiator in firm performance. And as noted by Knotts, Jones and La Preze (2004) if differences are found, this will be due to training or other background experiences other than gender. However, in this study, we are assuming that a common training and background would moderate any potential gender differences.

Numerous studies have been done on the entrepreneurship orientations or intentions of university students. This is, among many other reasons, because university students through their higher level education and training will in most cases assume managerial and entrepreneurial responsibilities in private and public organizations (Dhliwayo 2011). Both

male and female students are assumed to have under-gone the same learning processes and experiences which would have “screened out” any latent gender based traits (if it exists) that could affect entrepreneurial orientation. The assumption is that this then produces a fairly homogeneous sample for comparing orientations such as EI. As indicated by Audretsch (2014) the university education should provide entrepreneurial thinking, leadership and activity to enhance entrepreneurship capital. Raposo, Paco, and Ferreira (2008), postulates that the most important effect on the propensity to start-up a firm among students is education. This “education” becomes critical if it is “laced up” or anchored on entrepreneurship. The product is therefore not expected to be significantly different if it comes from the same mould. It is in this respect that the current study seeks to investigate the relationship between gender and entrepreneurship intention. The relationship between EI and gender is explored next.

Gender

Some research has shown that men and women differ in their motives and preferences for self-employment, with men being more motivated to gain wealth through business ownership (GEM Report 2007, Mueller and Dato-On 2008, Allen, Langowitz and Minniti 2007). Quaye et al., (2015) also found men to be more entrepreneurially oriented than women. This results from differences in gender socialization (Mueller and Dato-On 2008) or to the different socio-economic conditions that men and women are exposed to (Quaye et al., 2015). Allen et al., (2007) attribute the gap to differences in how men and women perceive the environment for entrepreneurship and their ability to succeed in it. According to Kundu and Rani, (2007) women are considered less assertive, less competitive and less aggressive in meeting the demands of the business situation. The GEM Reports (2009, 2010), reported that in South Africa, men are 1, 5 times more likely to be involved in entrepreneurial activity than women. Studying the reason for gender gap from an academic perspective can yield new insights on how to encourage and support entrepreneurs, especially females.

Quan (2012), Rosa, Carter and Hamilton (1996), Beckmann and Menkhoff (2008), Dabic, et al., (2012) and Canizares and Garcia (2010) reported that males are more likely than women to have entrepreneurial intention, because males tend to be more optimistic and more risks taking than females in general. This could be because, it is also believed, that women have a lower self-concept of their perceived abilities to become entrepreneurs as they believe that there are barriers staked against them. Kirkwood, (2009), De Vita, Mari and Poggesi (2014), Bernat, Lambardi and Palacios (2017), Gatewood, Shaver and Gartner (1995) also point out that women were less likely to become entrepreneurs than men. Whilst the number of women-owned firms has been growing at a rapid pace, these have been recognised as being smaller and younger than their male owned counterpart businesses. As proof to this assertion around the world, the rate of male entrepreneurs exceeds that of female, (Bengtsson, Sanandaji, and Johannesson 2012). This finding is consistent with those of Caliendo, Fossen, and Kritikos, (2014) and Bernat et al., (2017), who find that women are more risk averse than men which may account for the entrepreneurial gap observed. Risk taking is one key driver of entrepreneurship. Studies by Langowitz and Minitti (2007), Minitti and Nardone, (2007), and Veciana, Aponte, and Urbano (2005), found that there was a statistically significant difference in entrepreneurial intention between males and females.

Tan (2008) on the other hand points to a different direction and shows that women entrepreneurs outperform their male counterparts and engage in more risky ventures compared to the men. However literature which support the notion that women have a higher EI than males or that their businesses out-perform those of men in aspects such as size growth or financial performance are very few or non-existent at the most. The “glass ceiling” phenomenon may explain this position. More research on the differences in EI is therefore very important.

A third set of results other than that of one gender outperforming the other is of those who did not find any significant difference. Sonfield, Lussier, Corman and Mc Kinney (2001) found no significant differences in entrepreneurial aspects of innovation, risk propensity or strategies between the genders. Garcia and Marenco (2010), Fatoki (2014) and Zeffani (2013) who specifically studied university students also found no significant difference between the genders. This would be expected in a sample of university students, whose educational background would be more or less the same, in age and life experiences. As noted by Knotts et al., (2004) if differences are found, this will be due to training or other background experiences other than gender. It becomes of interest therefore to see if these dispositional differences exist when the genders have had a similar educational background and are being prepared for similar future business roles. Knotts et al., (2008) point out that, studies attempting to find inherent gender differences in entrepreneurial activities or propensities have generally been unsuccessful. According to Kirkwood (2009), however, many of the motivations in men and women are similar in nature. Men and women both perceive entrepreneurship to offer them a degree of independence. Therefore, male and female students are expected to share the same EI, given that they would have been exposed to the same soft and entrepreneurial skills and role models. Suartha and Suprapti (2016) point out for example, that the learning process at the university level is likely to encourage all students to become entrepreneurial or entrepreneurs. It is therefore hypothesized that there is no significant difference between the mean values of male and female students with regards to entrepreneurial intention (EI), hypothesis 1.

Gender bias of female entrepreneurs

Gender-bias or gender stereotyping is a challenge which is faced mostly by female

entrepreneurs. Female entrepreneurs often suffer from low credibility when dealing with the various business stakeholders. They are more disadvantaged than men (Chiloane and Mayhew, 2010) and face additional problems of being a woman in a male dominated society (McClelland, Swail, Bell and Ibbotson 2005). This is consistent with results found by Adachi and Hisada (2017) that women were less likely to be entrepreneurs than men and this difference was statistically significant. The authors also point out that women were likely to be in a more disadvantageous position when becoming entrepreneurs. Internal barriers range from a lack of assertiveness, self-confidence and communication skills and an absence of role models to a lack of marketing skills. It could therefore be the negative stereotyping and the proverbial “glass ceiling” that restrict their general entrepreneurial performance. These constraints need to be better understood so that appropriate interventions are made.

Entrepreneurial Intention

It is widely agreed that an orientation shapes a person's intention to act or behave in a particular way. As pointed out by Ajzen (1991) considered actions are preceded by conscious decisions to act in a certain way. Although static personality traits or dispositions of individuals were found to be ineffective at predicting entrepreneurial activity (Sandberg and Hofer, 1987) there have been attempts to adopt cognitive approaches such as Entrepreneurial Self Efficacy by Bandura (1995) to do so. Kim and Hunter (1993) showed that intentions predicted behaviour and attitudes predict intentions. This study's focus on intentions is premised on the fact that intentions and an individual's self-efficacy which Bandura (1995) notes gradually accumulates due to prior cognition and social and physical experiences. To some extent, self-efficacy therefore form part of the intention construct. Knowing that, these pre dispositions “orientations / intentions” will not remain static due to ongoing exposure to new experiences is important in order to curate appropriate interventions for future

entrepreneurs and managers. The study's methodology is discussed next.

Methodology

A questionnaire was used to collect data from 314 students at a South African university. The sample was purposively selected for convenience to comprise of Information Technology, Business Management and Engineering under graduate students in their second year of study. They were all studying a module in entrepreneurship when the data was collected.

The instrument, designed from literature, consisted of two sections, demographical data and entrepreneurial intention. As pointed out by Kwong, Thompson, Jones- Evans and Brooksbank (2009) demographic variables such as age and gender are often used as research controls in their own right. Entrepreneurial intention (EI) was measured using a 14 item scale adapted from the scale proposed by Covin and Slevin (1989) and Lumpkin and Dess (1996), Kundu and Rani (2007) and Ferreira, Raposo, Rodrigues, Dinis and Paço, (2012) and Bygrave (1989). According to Duobiene, Gavenas, Anskaitis and Pundziene (2007), entrepreneurship displays itself through new business creation, renewal, change and development of current organisation and through breaking and changing of established rules inside or outside the organisation. Within the individual, this is reflected through proclivity to innovation, risk taking, proactivity and autonomy (Lumpkin and Dess 2001). EI has become a central concept in the domain of entrepreneurship and has received a substantial amount of theoretical and empirical attention and this has led to the wide acceptance of the conceptual meaning and relevance of the concept (Rauch, Wiklund, Lumpkin and Frese 2009).

EI is the beliefs and behavioural intentions that suggest proclivity to investigate new business opportunities. The construct comprises most aspects which Ferreira et al., (2012) termed

‘Behavioural’ and ‘Psychological’. It includes dimensions such as, risk taking, innovativeness, proactivity, locus of control, autonomy and perseverance against adversity and ability to organise different resources necessary to start a business venture (Table 2). Psychological traits are predictors of entrepreneurial orientation (Krauss and Frese 2005). Participants were asked to rank on a 5 point Lickert scale how they related to the stated elements, covering the different dimensions.

Findings and Analysis

The descriptive statistical analysis shows that the gender breakdown was 53% female and 47% males and that 94% of the students were between the ages 18 and 25 and the remainder (6%), between 25 and 30 years. This is a true reflection of the student’s population mix at the particular university and other universities in South Africa. A Cronbach’s analysis was done and the results, (Table 1) show that the data structure is reliable as reflected by a high alpha of 0.832, a percentage variance of 0, 63 and an eigenvalue value of 1.883. Cronbach’s values of above 0.6 are considered strong measures of reliability (Nunnally and Bernstein 1994).

Table 1. Factor Cronbach’s alpha, percentage variance and eigenvalues

	Entrepreneurial Intention
Cronbach’s alpha	0.832
Percentage variance explained	0.63
Eigenvalue	1.883

The levels of EI among the students was very high as reflected in Table 2. The lowest mean is 1.35 and the highest 2.57 (1= strongly agree and 2 = agree respectively). Hamidi et al., (2008),

Mbuya and Schachtebeck (2016) found that students who engaged in academic entrepreneurship programs have higher intentions to start their own businesses in the future. As pointed by Ferreira et al., (2017), there is a positive relationship between education and entrepreneurship, and also that entrepreneurship education promotes entrepreneurial intention of university students (Walter, Parboteeah, and Walter 2013). Obschnka et al., (2017) posits that these intentions constitute a more or less concrete plan to prepare a business start-up in future. Studies have also shown that early entrepreneurial intent predict later entrepreneurial activities in adult-hood (Schoon and Duckworth 2012). It should be pointed out that the high levels of EI observed cannot be solely attributed to the entrepreneurial modules offered by the university, but possibly too many other factors within and without the university not analysed here.

Table 2. Mean statistics for entrepreneurial intention (EI)

Construct statements	Mean	Std dev
I have a desire to overcome problems and establish a successful business	1.71	0.915
Anything is possible if I am committed	1.35	0.779
I take calculated risks	2.07	0.896
I am driven by excellence, that is, the need to be outstanding	1.74	0.886
I believe that failure is necessary to learn from, for one to succeed	1.87	1.121
I consider myself to be creative and innovative	1.77	0.823
I can source and organise different resources necessary to start a business	2.24	0.848
I can handle conflict	2.00	0.894
I am willing to leave with risk and uncertainty	2.67	1.172
I work long hours with vigour in order to achieve goals that are important to me-	1.90	0.987
I believe that I can accomplish what-ever I set out to achieve, learning what I need to learn along the way	1.50	0.802
I pursue rapid growth as a dominant goal	2.04	0.916

I take large, bold decisions despite uncertainties of the outcome	2.44	1.058
I prefer steady growth and stability as primary outcomes	2.00	1.00

It was hypothesized that there would be no significant difference between the mean values of male and female students with regards to entrepreneurial intention (EI), hypothesis 1. This was tested using analysis of variance (ANOVA) and the results are shown in Table 3. The Levin statistic = 1.012 and p value = 0.364 > 0.05 shows that the means are not significantly different. There is therefore no statistically significant difference between female and male students with regards to EI. The stated hypothesis is therefore accepted.

Table 3. Entrepreneurial Intention (EI) and gender ANOVA

Independent samples test

		Levine's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Mean_ Entrepreneurial Intention	Equal variances assumed	1.024	.312	.615	408	.539	.033	.053	-.072	.137
	Equal variances not assumed			.616	405.624	.538	.033	.053	-.072	.137

The studies that found similar results (no statistically significant differences) as this study include, Quaye et al., (2015), Knotts et al., (2008), Sonfield et al., (2001). However, this finding is not in line with the findings by Lim and Enrick, (2013) and Smith, Smits and Hoy (1992) who found that male students scored higher on entrepreneurial intention than female students. Though

according to the GEM Report, (2010), females' participation in entrepreneurship varies across economies, it is nearly always less than that of males. Though there might be a difference between males and females with regards to EI, less females may actually start businesses due to external barriers. Although this was not what was studied here (external barriers), these barriers are known to exist.

Conflicting results regarding intention between the genders continue to be found. It can therefore be concluded that the results may be specific to a particular group and may therefore not be generalised. This means that in certain groups of a population EI may differ significantly between males and females and in some it may not. Relying on findings of previous studies, either gender may be found to be more entrepreneurial than the other or there might be no significant differences. However cases where female owned businesses outperform male owned are very few. As pointed out by Desouza and Paquette, (2011) different studies conducted by international organisations such as the International Labour Organisation (ILO: 2011) and the United Nations Industrial Development Organisation (UNIDO, 2012) confirmed that policy makers undermine the role of women with "gender-blinded" policies in the capacity building and development of SMEs. Women are viewed as less entrepreneurial resulting in negative biases to their endeavours to start and run successful ventures (McShane and Glinow, 2014). Unfortunately this bias leads to economies failing to optimally harness the unique capabilities female entrepreneurs can contribute (Zoogah and Beugré, 2013, Bernat 2017). It also then condemns them to perpetual entrepreneurial under performance if appropriate affirmative interventions are not undertaken.

Based on the results of this study, this is a loss that countries, especially developing ones can ill afford, given the investment that would have been made in the female child's education. This discrimination is not justified given that there is no significant difference in EI between

the genders. In situations where differences are registered, affirmative policies (supportive discrimination) would be recommended instead of the negative bias. This assertion for affirmative gender discrimination is needed to support start-ups and mentorships for growth. The female gender biased policy position when promoting entrepreneurship is supported in previous studies such as Yusuf (2010) and Adachi and Hisada (2017).

Given the fact that results from different studies seem to have a local sample bias, it is recommended that local government structures should implement policies that will enhance women entrepreneurship locally. The justification for this call would be the literature finding which shows that women led businesses are often not growth oriented, (Terjesen et al., 2015, Tegtmeier, Kurczewska and Halberstadt, 2017) and are less focused on making money. This calls for continued gender studies, especially longitudinal ones. For example if the EI of students does not show any significant differences as shown in this study, why would there be a different future between the genders, (if any) with regards to entrepreneurial motives or performance? Also for example, why is it that as shown by Tegtmeier et al., (2017), Morris et al., (2006), the majority of female owned entities are in lower profit industries, have lower profits and employees than those owned by men? Could this be because the business environment in which they operate already has some invisible boundaries in which they are supposed to operate?

One also has to bear in mind that, as pointed out by Schendel and Hoffer (1979) the entrepreneurial mind-set is central to business start-up, growth strategies and survival. The underlying assumption of the study's finding is that potential differences based on gender (if any) may have been moderated by the educational learning experiences which students (both genders) went through (although this *moderation* was not tested). The study was carried out among students who had undertaken entrepreneurship as a subject at a university. The way the

entrepreneurship course was delivered as well as the culture at the university might have inculcated the EI among the students, hence the absence of differences in orientation. More universities and other educational institutions nowadays try to equip their students with the skills to know how to start and successfully manage a business, (Bergmann, et al., 2016), and Walter et al., (2013), show that the availability of entrepreneurial education increases the EI of university students. And as pointed out by Tegtmeier (2017) offering entrepreneurship courses does not only affect the participants themselves but also other students, through social interactions and observations.

One other weakness of this study is that the intentions were expressed by students, with no actual application tested. The actual future application is therefore unknown and this is where longitudinal studies which can trace these individuals over time would be needed. The study set out to compare the entrepreneurial intentions of male and female university students. It was expected that the intentions would not be influenced by gender and this was confirmed by the study.

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